

# The effect of parental education on academic outcome in college students

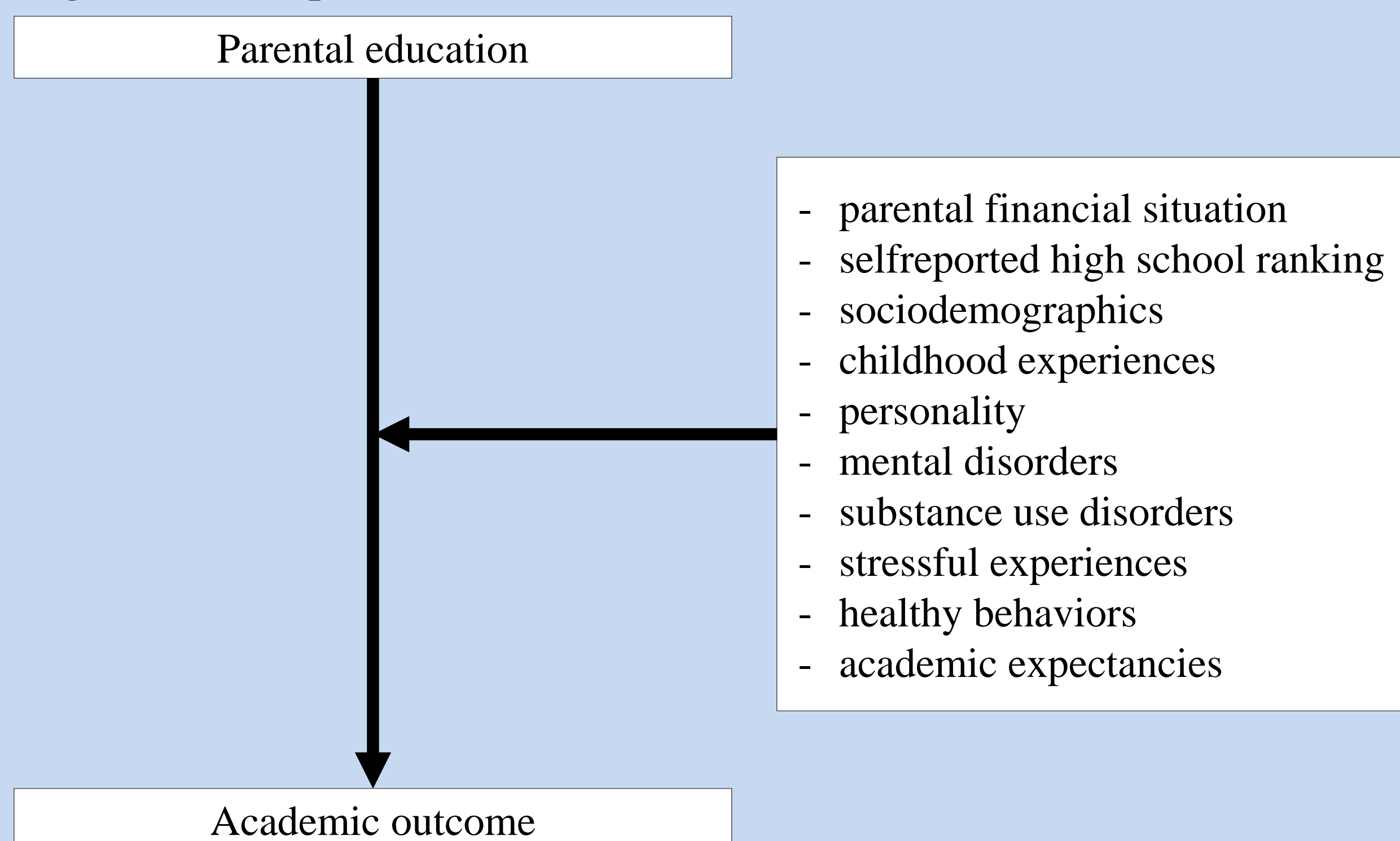
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## OBJECTIVES

Little is known about the effect of socio-economic status on academic outcome among college students. We wanted to investigate the direct effect of parental education on grade point average by adjusting for a wide range of relevant covariates, including parental financial situation and academic results in high school (see Figure 1).

**Figure 1. Conceptual model.**



## METHODS

We surveyed a random sample of 2,364 Belgian KULeuven freshmen (response rate 66.8%) on a wide range of mental health variables using validated measures (e.g. the Global Appraisal of Individual Needs Short Screener). We ran multivariate regression models with GPA (divided into 5% intervals) as the dependent variable, parental education as the independent variable, and age, gender, nationality, parental financial situation, familial composition, self-reported high school ranking, childhood experiences, personality dimensions, risk scores for past year mental and substance use disorders, past year stressful experiences, healthy behaviors, and academic expectancies as covariates. GPA was obtained at the end of the academic year at the student administration office of the KULeuven.

## RESULTS

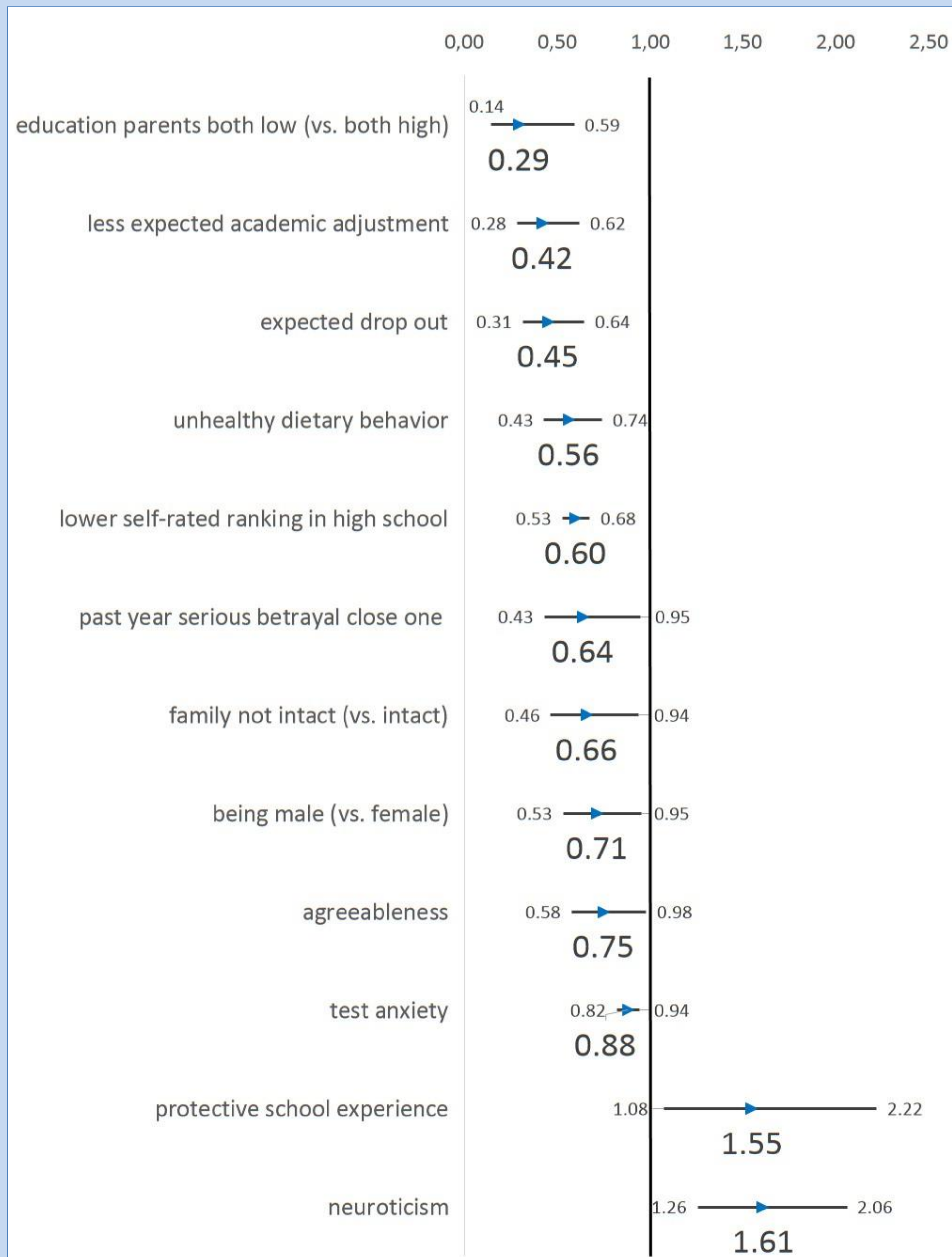
The mean age of the sample was 19.0 years. Other sociodemographic characteristics of the sample are summarized in Table 1.

**Table 1. Sociodemographic characteristics of the sample**

males	45.10%
non-Belgian nationality	6.60%
non-intact family	21.20%
non-heterosexuals	5.20%
no religion	43.10%
parental education both high	58.60%
parental education both mixed	24.80%
parental education both low	16.60%
difficult financial situation	16.20%

In a full linear regression model ( $F=7.13$ ;  $df=53$ ;  $p<0.0001$ ;  $R^2=41.1\%$ ), the association between both parents having a low educational level (vs. both high) and GPA was 0.29 (0.14-0.59). There were significant associations between GPA and being male (0.71), having a non-intact family of origin (0.66), lower self-rated high school academic ranking (0.60), positive past school experiences (1.55), agreeableness (0.75), neuroticism (1.61), test anxiety (0.88), past year serious betrayal by a close one (0.64), unbalanced dietary behavior (0.56), expected academic drop-out (0.45), and less expected academic adjustment (0.42) (Figure 2).

**Figure 2. Significant ( $p < 0.05$ ) predictors (in OR) of GPA in freshmen.**



## CONCLUSION

We found low parental education to be a strong and independent predictor for adverse academic outcomes. Possible explanations are genetic effects and socio-economic mediators that are not accounted for in the regression model. More research is needed since identifying modifiable mediators between socio-economic status and academic outcome may lead to possible targets for intervention strategies.

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